CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

ORDER NO. 93-80

WASTE DISCHARGE REQUIREMENTS FOR CITY OF LOMPOC CLASS III LANDFILL SANTA BARBARA COUNTY

The California Regional Water Quality Control Board, Central Coast Region (hereafter Board), finds:

1. The City of Lompoc (hereafter "**Discharger**") owns and operates the City of Lompoc Class III Landfill (hereafter "**Landfill**").

2. The 115.4 acre Landfill is located 1.5 miles southwest of Lompoc at the south end of Avalon Road, in portions of Sections 5 and 8 of T6N, R34W, SBB&M, as shown on Attachment "A" included as part of this Order.

3. These Waste Discharge Requirements (WDR) are being revised/updated to incorporate all criteria currently applicable to solid waste disposal sites, particularly:

   a. criteria established in California Code of Regulations, Title 23, Division 3, Chapter 15 (Chapter 15), including Article 5, pertaining to landfill water quality monitoring and response programs, as amended July 1, 1991;

   b. criteria established in California Code of Regulations, Title 14 (Title 14), Division 7, Chapter 3, Article 7.8; Chapter 5, Article 3.4; and Chapter 5, Article 3.5, pertaining to Closure and Post-Closure Regulations; and

   c. criteria established in 40 CFR Parts 257 and 258 Solid Waste Facility Disposal Criteria, Final Rule (Known as "Subtitle D"), as promulgated October 9, 1991.

   Timely implementation of current monitoring requirements and pertinent changes, including compliance with stringent state and federal landfill regulations, will keep the landfill in compliance.

4. The Discharger has been regulated by WDR Order No. 91-26, "Waste Discharge Requirements for the Lompoc Class III Landfill" adopted by the Board on March 8, 1991. This Order revises/updates and replaces Order No. 91-26. The Landfill has been operating since 1961.

5. Land uses within 1000 feet of the Landfill are as follows:

   a. North of the site is an auto wrecking yard, a church, a trailer, and 29 residential dwellings.

   b. The south, east, and west of the site are used for livestock grazing.

6. The Landfill lies approximately 2.5 miles south of the Santa Ynez River in the Lompoc Valley, as shown on Attachment C. The nearly flat, alluvium-floored Lompoc Valley is bordered by the Pacific Ocean on the west, the Purisima Hills to the north, The Santa Rita Hills to the east, and the Lompoc Hills to the south. The Lompoc Valley encompasses the Lompoc Terrace, the Lompoc Plain, and the Lompoc Upland, and is a subarea of the Santa Ynez River basin. The site is in a canyon near the southern edge of the Lompoc Plain in the steeply rising Lompoc Hills of the Lower Santa Ynez Mountains. The upper Miocene-Pliocene Sisquoc and upper Miocene Monterey Formations underlie the Landfill. These

formations crop out at the Landfill as part of a northwest/southwest tending anticline and syncline. The Landfill varies between 260 feet above mean Sea Level (MSL) at its northern edge to 400 feet above MSL in the upper benches of the Canyon.

7. The 100-year flood plain for the Santa Ynez River is located approximately one mile northwest of the Landfill. Two ephemeral streams are within one mile of the Landfill. The site occupies the lower reaches of a canyon complex with a total contributing watershed area of approximately 300 acres. Drainage runoff is carried by 24 inch channels cut on the east and west faces of the Landfill or by sheeting. The drainage is carried from the channels to the toe by a 36 inch storm drain pipe to an open channel at the northern border of the Landfill. The open channel empties into the Santa Ynez River. The drainage system has been designed to handle the 100-year, 24 hour storm.

8. The soils underlying site consists primarily of diatomaceous earth classified as a clayey-silt (MH). Diatomite is in the broad anticline syncline folds to depths of 500 feet. The diatomite is exposed in cuts up to 50 feet high within the canyon. Portions of the site's diatomite are mixed with gypsum, and at the southern edge deposits of black chert are interlaced. Areas of the canyon are overlain with alluvial fill 2-50 feet thick that is also classified as a clayey silt (MH). The diatomaceous soils have a high absorption rate and maintain a low permeability of 1×10^{-5} cm/sec. The alluvium permeability ranges from 6.5×10^{-5} cm/sec to 1×10^{-4} cm/sec. In-situ permeability at well E2 at the toe of the Landfill has an average value of 2.6×10^{-5} cm/sec for depths of 100-120 feet. Permeability at Well E4 on the west slope of the site at depths of 284-304 feet is 1×10^{-6} cm/sec.

9. Water has been encountered in three hydrogeologic units.

   a. The Unconsolidated Alluvium lies above siltstone of the Sisquoc formation. The aquifer found within the unconsolidated deposits is the main aquifer tapped for water in the Lompoc Valley. The ground water bearing zone is unconfined.

   b. The consolidated fine-grained rocks of the Sisquoc formation produce water from fractures within the formation. The ground water flow is interstitial and confined.

   c. The Monterey formation is a thin bedded, silica cemented to cherty, diatomaceous shale. The cherty beds are commonly fractured and contain water. The flow is interstitial and confined.

10. Located within one mile of the site are 62 wells of which 47 are active. Two of the wells are for domestic use and are located in Sloans Canyon West of the site. The remaining wells are used for agricultural purposes.

11. The surrounding topography determines local ground water recharge and flow patterns. Ground water flows northward into the Lompoc Valley and then follows the regional ground water flow westward to the Pacific Ocean. Ground water velocity beneath the Landfill is estimated to range from 10 to 40 feet per year with a local gradient of 0.047 to the north.

12. Shallow ground water is generally poor quality due to mineralization. The October 17, 1986 Hydrogeologic Report prepared for the Landfill by EMCON Associates indicated levels of total dissolved solids and lead are high enough to potentially limit the use of shallow ground water for domestic uses. Insufficient information is currently available to determine whether the Landfill is a source of the TDS and lead. The Discharger intends to install at least one well in an adjacent canyon for the purpose of determining "background" ground water quality.

13. Volatile Organic Compounds (VOC) have been detected north of the Landfill's toe (well E1) since 1986. The three compounds of concern found in the ground water table are tetrachloroethane (PCE), trichloroethene (TCE), and 1,2-dichloroethene (1,2-DCE). As a result, wells E5 and E6 were subsequently installed to conduct an evaluation monitoring program. Well E5 is upgradient of E1 and is drilled through the Landfill. E5 has detected TCE, PCE, and 1,2-DCE since its' first test in March 1988. No contaminants have been detected in well E6. In January of 1989 well E7 was installed 640 feet down gradient of E1 at the base of the Landfill canyon. The levels of TCE, PCE, and 1,2-DCE have declined steadily in wells E1 and E5 since evaluation monitoring began. Wells E2, E3, and E4 have not detected VOC contamination as of the January 1993 quarterly monitoring report.

14. The Water Quality Control Plan, Central Coast Basin (Basin Plan), was adopted by the Board on November 17, 1989, and approved by the State Water Resources Control Board on August 16, 1990. The Basin Plan incorporates statewide plans and policies by reference and contains a strategy for protecting beneficial uses of State Waters. This Order implements the water quality objectives stated in that Plan.

15. Present and anticipated beneficial uses of surface waters downgradient of the discharge include:

    a. municipal and domestic supply;
    b. agricultural supply;
    c. ground water recharge;
    d. warm fresh water habitat;
    e. non-contact water recreation; and
    f. wildlife habitat.

16. Present and anticipated beneficial uses of ground water in the vicinity of the discharge include municipal and domestic supply and, agricultural supply.

17. The Landfill's operation complies with the solid waste handling and disposal objectives established in the 1984 Santa Barbara County Solid Waste Management Plan. Solid Waste Facility Permit No. 42-AA-017 was issued by the California Integrated Waste Management Board and updated on March 30, 1993.

18. The Landfill is suitable for receiving wastes classified as nonhazardous solid wastes, based on criteria set forth in Chapter 15. No liquid or hazardous wastes are disposed.

19. Wastes containing greater than one percent (>1%) friable asbestos are classified as hazardous under CCR, Title 22. Since such wastes do not pose a threat to water quality, Section 25143.7 of the Health and Safety Code permits its disposal in any landfill, providing waste discharge requirements specifically permit the discharge and the wastes are handled and disposed of in accordance with other applicable State and Federal statutes and regulations.

20. The Landfill has a remaining capacity of approximately 3.0 million cubic yards. Expected remaining life of the Landfill as given in the CIWMB updated permit is to the year 2047. Landfilling proceeds from south to north in lifts between five and ten feet. Currently, the Landfill receives a daily average of approximately 400 to 500 tons of trash per day. Approximate percentages of materials received for disposal are:

Residential	61%
Industrial	3%
Commercial	34%
Demolition	2%

Daily cover is a six-inch-thick compacted mixture of potable water treatment (PWTP) sludge and native soil. Solid wastes are received from the City of Lompoc, Vandenberg Village, Mission Hills, and adjacent unincorporated areas.

21. The City performed a one-year pilot project to demonstrate the viability of use of the PWTP sludge and native soil mixture for alternative daily cover. The November 15, 1990 report titled "Soil Amendment Pilot Demonstration Project Evaluation of Alternative Daily Cover", concluded that the amended soils are a superior cover material in regards to permeability, susceptibility to erosion, vector containment, odors, and dust control. The PWTP sludge is inert, inorganic, nonhazardous, nonpathogenic and contains greater than 50% solids when delivered to the Landfill. The California Integrated Waste Management Board approved the use of the resultant mix as daily cover on March 15, 1991.

22. A "Recycling Area" is located near the Landfill toe. The Center accepts commingled recyclables, tires, metals, green waste, construction debris, and used motor oil. The used oil is visually screened by site personnel prior to placement in a storage tank.

23. On May 20, 1993, the Discharger opened a permanent household hazardous waste (HHW) collection facility at the Landfill. The HHW is stored on a concrete loading area which is underlined with an impervious liner and surrounded by a concrete berm. Wastes are separated by type and stored in metal sheds. The waste are stored on site for a maximum of 90 days before transfer to appropriate reuse or disposal facilities.

24. Due to revisions to Article 5 of Chapter 15, which went into effect July 1, 1992, the Discharger's existing monitoring programs for ground water, surface water, and the unsaturated zone will need to be improved, and financial assurance for current or potential corrective action must be established. To comply with Article 5, the Discharger submitted the February 24, 1992, Water Quality Monitoring and Response Program, Lompoc Landfill, Santa Barbara County, prepared by Lompoc's staff. The Landfill currently meets all other Chapter 15 criteria for classification as a Class III landfill suitable to receive nonhazardous solid wastes.

25. The Solid Waste Assessment Test (SWAT) report required by all dischargers was waived for the Landfill by the Executive Officer in a letter dated January 25, 1989. Primary reason cited for the exemption was that the Landfill is currently in Evaluation Monitoring and the revenue that would have been used to fulfill the SWAT requirements could be better used for "Evaluation Monitoring."

26. On October 9, 1991, the Environmental Protection Agency (EPA) promulgated regulations pertaining to solid waste disposal facilities known as 40 CFR, Parts 257 and 258 Solid Waste Disposal Facility Criteria, Final Rule (also known as Subtitle D). Subtitle D implementation/applicability is as follows:

    a. MSW Landfills with WDR's that stopped receiving waste on or before October 9, 1991 are exempt from Subtitle D except for monitoring requirements and deed restrictions.

    b. Units that receive waste on or after October 9, 1991, but stop prior to October 9, 1993, must only meet the final cover requirements specified in Section 258.60(a).

    c. Units that receive waste on or after October 9, 1993 must comply with all requirements of Subtitle D.

    Subtitle D became effective on October 9, 1993 (except subpart G, financial assurance requirements, which become effective April 9, 1995.

27. Discharge of waste is a privilege, not a right, and authorization to discharge waste is conditioned upon the discharge complying with provisions of Division 7 of the California Water Code and with any more stringent effluent limitations necessary to implement the Basin Plan, to protect beneficial uses, and to prevent nuisance. Compliance with this Order should assure conditions are met and mitigate any potential changes in water quality due to the project.

28. This project involves an update of Waste Discharge Requirements initiated by the Board. These Waste Discharge Requirements are for an existing facility and as such are exempt from provisions of the California Environmental Quality Act (Public Resources Code, Section 21000, et seq.) in accordance with Title 14, California Code of Regulations, Chapter 3, Section 15301.

29. On August 25, 1993, the Board notified the Dischargers and interested agencies and persons of its intention to update the waste discharge requirements for the discharge and has provided them with a copy of the proposed Order and an opportunity to submit written views and comments.

30. After considering all comments pertaining to this discharge during a public hearing on November 12, 1993, this Order was found consistent with the above findings.

IT IS HEREBY ORDERED pursuant to authority in Section 13263 of the California Water Code, the City of Lompoc, its agents, successors, and assigns may discharge wastes at the City of Lompoc Class III Landfill, providing compliance is maintained with the following:

Throughout these requirements footnotes are listed to indicate the source of requirements specified. Requirement footnotes are as follows:

a = Title 23, Chapter 15
b = Title 14
c = Basin Plan
d = CFR Part 257 and 258
e = Standard Provision (Adopted January, 1984)
f = California Water Code

Requirements without footnotes are based on professional judgement.

A. DISCHARGE PROHIBITIONS

1. Discharge to areas outside the designated disposal area, as specified in the most current version of the Operations Plan and identified in Attachment B, is prohibited.

2. Discharge of hazardous wastes (as defined in Chapter 15), except for waste that is hazardous due only to its asbestos content, is prohibited.[a]

3. Discharge of designated waste is prohibited except when the discharger demonstrates to the Executive Officer's satisfaction that waste constituents present a lower risk of water quality degradation than indicated by this classification. For purposes of this Order the term "designated waste" is defined in Chapter 15.[a]

4. Discharge of liquid or semi-solid waste (i.e., waste containing less than 50 percent solids by weight), other than leachate and gas condensate as described in Discharge Specification B.7 and dewatered domestic sludge, is prohibited.[a] Exemptions to discharging wastes containing less than 50% solids by weight may be granted by the Executive Officer if the Discharger can demonstrate the discharge will not exceed the moisture holding capacity of the Landfill either initially or as a result of waste management operations, compaction, and/or settlement.

5. Discharge of waste to ponded water from any source is prohibited.[a]

6. Ponding of liquids over solid wastes is prohibited.

7. Discharge of leachate or gas condensate containing hazardous concentrations of constituents is prohibited.

8. Discharge of wastes which have the potential to reduce or impair the integrity of containment structures is prohibited.

9. Discharge of wastes which, if commingled with other wastes, could produce violent reaction, heat or pressure, fire or explosion, toxic by-products, or reaction products, which in turn:[a]

   a. require a higher level of containment than provided by the Landfill,

   b. are restricted hazardous wastes, or

   c. impair the integrity of containment structures,

   is prohibited.

10. Discharge of wastes within five feet of the highest anticipated elevation of underlying ground water, including the capillary fringe, is prohibited.[a]

11. Discharge of waste within 50 feet of the property line, 100 feet of surface waters, or 100 feet of any domestic water supply wells is prohibited.

12. Discharge of solid or liquid waste or leachate to surface waters, drainageway(s), or ground water, is prohibited.

13. Discharge of waste containing free liquid or moisture in excess of the waste's moisture holding capacity is prohibited. Waste must pass the paint filter test to determine if free liquids are present.[a,d]

14. Discharge of waste solvents, dry cleaning fluids, paint sludges, pesticides, phenols, brines, and acid and alkaline solutions is prohibited.[a]

15. Discharge of oils or other liquid petroleum products is prohibited.[a]

16. Discharge of chemical and biological warfare agents is prohibited.[e]

B. DISCHARGE SPECIFICATIONS

1. The Discharger shall implement the attached Monitoring and Reporting Program No. 93-80 (MRP) in order to detect, at the earliest opportunity, any unauthorized discharge of waste constituents from the Unit, or any unreasonable impairment of beneficial uses associated with discharges of waste to the Unit.[a]

2. Discharge of waste shall not cause the concentration of any Constituent of Concern or Monitoring Parameter to exceed its respective background value in any monitored medium at any Monitoring Point assigned to Detection Monitoring pursuant to the current version of the MRP.

3. Discharge shall not cause the release of pollutants, or waste constituents in a manner which could cause a condition of pollution, or nuisance to occur, as indicated by the most appropriate statistical [or non-statistical] data analysis method and retest method listed in MRP Part III.[a,f]

4. The discharge shall neither cause nor contribute to pollution of ground water via the release of waste constituents in either liquid or gaseous phase.

5. The discharge shall neither cause nor contribute to any surface water, pollution, or nuisance, including, but not limited to:

   a. floating, suspended, or deposited macroscopic particulate matter or foam;

   b. increases in bottom deposits or aquatic growth;

   c. adverse changes in temperature, turbidity, or apparent color beyond natural background levels;

d. the creation or contribution of visible, floating, suspended, or deposited oil or other products of petroleum origin; and/or

e. the introduction or increase in concentration of toxic or other pollutants/contaminants resulting in unreasonable impairment of beneficial uses of waters of the State.

6. Unsaturated Zone: Discharge shall not cause any increase in the concentration of waste constituents in soil-pore gas, soil-pore liquid, soil, or other geologic materials outside of the Landfill if such waste constituents could migrate to waters of the State, in either the liquid or the gaseous phase, and cause a condition of pollution/or nuisance.

7. Water (including non-hazardous and non-designated leachate and gas condensate) used during disposal site operations shall be limited to a minimal amount reasonably necessary for dust control, construction (soil compaction), and vegetation establishment/irrigation purposes. Water, leachate and condensate, used at the Landfill, shall not infiltrate into areas containing wastes.

8. Disposal site operations shall not be a source of odor nuisance.

9. The Discharger shall prevent habitat formation for carriers of pathogenic organisms.[c]

10. The handling and disposal of friable asbestos containing wastes shall be in accordance with all applicable federal, state, and local statutes and regulations.

11. Ash wastes may be discharged in the Landfill only when chemical analyses are provided to the Executive Officer's satisfaction that the waste is non-hazardous.[a]

12. As of the adoption date of this order, the Discharger shall remove and relocate any wastes discharged in violation of these requirements.

13. All refuse material that is wind-blown outside the Landfill area shall be collected regularly and disposed in the Landfill. If wind-blown litter is or becomes a continuing problem, containment barriers (e.g., screens and/or fences) shall be constructed to prevent spreading of refuse.

14. The Discharger shall obtain and maintain a Board approved Financial Assurance Instrument (Instrument) to demonstrate financial responsibility for initiating and completing corrective action for all known or reasonably foreseeable releases from the landfill until the end of the Post-Closure Maintenance Period, pursuant to Chapter 15 regulations. The Instrument shall be legally valid, binding and enforceable under State and Federal law.[a]

15. The Discharger shall operate the Landfill in conformance with a Site Operations Plan approved by the Executive Officer, except where the plan(s) conflicts with this Order. In the event of conflict, this Order shall govern in cases where it is the most conservative. Any changes to the Site Operations Plan that may affect compliance with this Order must be approved in writing by the Executive Officer.

16. A program for periodic intake load-checking shall be maintained to ensure that 'hazardous waste', 'designated waste' and 'radioactive waste' are not discharged at this Landfill.[a]

17. The Discharger shall not discharge municipal solid waste (MSW) to a wetland - as defined in 40 CFR Section 232.2(r) - or to any portion thereof,

unless the Discharger successfully completes all demonstrations required for such discharge pursuant to 40 CFR Section 258.12(a).

Such demonstration shall be based upon an Executive Officer approved report addressing compliance with Section 404 of the Federal Clean Water Act, as listed in 40 CFR Section 258.12(a)-(a) (f).[d]

18. Refuse shall be covered daily by at least six inches of cover material or, if allowed by the Local Enforcement Agency, meet Performance Standards of the California Code of Regulations, Title 14, Section 17683. Cover material shall promote lateral runoff of rainfall away from Designated Disposal Area. Upon Executive Officer approval, alternative daily cover materials may be utilized. Long-term alternatives to the daily cover requirements must satisfy the Alternative Daily Cover Procedures and be approved by the CIWMB.[a,b]

19. By November 1, of each year, all necessary runoff diversion and erosion prevention measures shall be in place, and all necessary construction, maintenance, or repairs of precipitation and drainage control facilities shall be completed to prevent erosion or flooding of the Landfill and to prevent surface drainage from contacting or percolating through wastes.[a]

20. All landfill surfaces and working faces shall be graded and operated to minimize rainfall infiltration into wastes, to prevent ponding of water, and to resist erosion. Positive drainage to divert rainfall runoff from areas containing waste shall be provided.

21. Drainage ditches crossing over landfill areas shall be lined with material which provides an effective permeability of 10^{-6} cm/sec or less. If material other than clay or synthetic is used, data must be provided to, and approved by, the Executive Officer. The drainage facilities shall be designed and constructed to accommodate anticipated and peak surface runoff flows from a 100-year, 24-hour event.

Storm Runoff

22. Water collected in the storm water catchment basin or site water treatment facility may be used in minimum amounts necessary for dust-control, compaction, or irrigation of cover vegetation provided none of the water infiltrates past the root zones of vegetation or past a depth where effective evaporation can occur.

23. Waste containment barriers shall be maintained to ensure their effectiveness.[a,b]

24. The Discharger shall monitor potential releases from the site related to surface water runoff by complying with all NPDES Stormwater Monitoring Program requirements.

25. Storage facilities associated with precipitation and drainage control systems shall be emptied immediately following each storm, or otherwise managed, to maintain the design capacity of the system.[a]

26. If adequate daily cover material is not accessible during inclement weather, such material shall be stockpiled during favorable weather to assure compliance.

27. By November 1, of each year, a minimum one-foot thick soil cover which is compacted and sloped to minimize permeability (i.e., intermediate cover), and designed to minimize water infiltration and erosion, shall be placed over all Landfill areas which do not have such a cover. Intermediate cover shall be graded to a slope of at least 3%, but not greater than 10% unless adequate erosion controls are implemented and approved by the Executive Officer. Hydroseeding (or other erosion control method) shall be performed when soil moisture conditions are adequate to support vegetation (usually immediately following the first rainfall after October 1 of each year). Soil amendments may be used on intermediate cover following approval of the Executive Officer. Intermediate cover is not required on wet weather disposal areas.

28. Vegetation grown on intermediate and final covered areas shall be selected to minimize irrigation, minimize erosion, minimize moisture infiltration, and shall not impair the integrity of containment structures including final cover. Soil amendments and fertilizers (including wastewater sludge) used to establish vegetation shall not exceed the vegetation's agronomic rates (i.e., annual nutrient needs), unless approved by the Executive Officer.

29. During winter months, disposal activity shall be confined to the smallest area practical based upon anticipated quantity of wastes and operational procedures.

30. The Discharger shall monitor potential releases from the site related to surface water runoff by complying with all NPDES Stormwater Monitoring Program requirements.

31. Surface drainage from tributary areas and internal site drainage of surface and subsurface origin shall not be allowed to contact or percolate through wastes.

32. A minimum of two feet of freeboard shall be maintained in all rainfall runoff containment ponds.[a]

Design

33. Waste management units, containment structures, and drainage facilities shall be designed, constructed and maintained to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, overtopping, and other damage due to natural disasters (e.g., floods with a predicted frequency of once in 100 years, the maximum probable earthquake, and sever wind storms).[a]

34. Waste management units, containment structures and drainage facilities shall be designed and constructed under the direct supervision of a California registered civil engineer or a certified engineering geologist, and shall be certified by that individual as meeting the prescriptive standards and performance goals of all state and federal regulations including, but not limited to Chapter 15, Title 14 and Subtitle D, prior to waste discharge.[a]

35. Discharges of waste to any lateral expansion (i.e., a horizontal expansion of the waste boundaries) of a municipal solid waste (MSW) landfill unit are prohibited unless the discharge is to an area equipped with a system, which contains:[d]

    1) A composite liner and a leachate collection and removal system. The liner must consist of two components:

a) Upper Component: A minimum 40-mil flexible membrane liner (FML) or a minimum 60-mil high density polyethylene (HDPE). The FML component must be installed in direct and uniform contact with the compacted soil component.

b) Lower Component: A minimum two-foot layer of compacted soil with a hydraulic conductivity of no more than $1x10^{-7}$ cm/sec.; or

2) An engineered alternative to the above prescriptive design. Engineered alternative designs must meet specified conditions and performance standards, as determined by the Executive Officer, for the protection of water quality.

36. Permeability determinations shall be as specified in Article 4 of Chapter 15. Permeabilities specified for containment structures other than cover shall be relative to the fluids, including waste and leachate, to be contained. Permeabilities specified for cover shall be relative to water. Liner and cover permeabilities shall be determined primarily by appropriate field test methods in accordance with civil engineering practice (double ring infiltrometer test is required). The results of laboratory tests with both water and leachate, and field tests with water, shall be compared to evaluate how the field permeabilities will be affected by leachate. Appropriate compaction tests may be used in conjunction with laboratory permeability tests to determine field permeabilities as long as a reasonable number of field permeability tests are also conducted.[a]

37. Leachate collection and removal systems shall be installed immediately above all liner systems, and shall be designed, constructed, maintained and operated to collect and remove twice the maximum anticipated daily volume of water/leachate from the Unit.[d]

38. Hydraulic head shall not be allowed to build on any portion of the liner. The depth of fluid in any collection sump shall be kept at the minimum needed to ensure efficient pump operation.[a]

39. Areas at final elevations shall be covered with final cover pursuant to Section 2581 of Chapter 15 including from bottom to top:[a]

a. at least a two foot foundation layer placed over waste;

b. a low permeability geomembrane or compacted soil with an in-place permeability $1x10^{-6}$ cm/sec, or no faster than the permeability of underlying natural geologic materials, which ever is less; and

c. at least one foot of soil capable of supporting vegetation, resisting erosion, and protecting the underlying low permeability layer.

Hydraulic conductivity of a low-permeability soil layer shall be determined by both laboratory and in-place field testing. Permeability determinations for cover materials shall be as specified in Article 4 of Chapter 15 and shall be appended to the final closure and post-closure maintenance plan. Construction methods and quality assurance procedures shall be submitted to the Executive Officer, and shall insure all parts of the low-permeability layer meet the hydraulic conductivity and compaction requirements. The final cover shall be graded to a slope of at

least 3%, but not more than 10% unless adequate erosion control measures are implemented and approved by the Executive Officer.

40. Discharger shall notify Board staff within 24 hours by telephone and within seven days in writing, of any noncompliance potentially or actually endangering health or the environment. Any noncompliance which threatens the landfill's containment integrity shall be promptly corrected. All correction methods and schedules shall be approved by the Executive Officer, except when delays will threaten the environment and/or the Landfill's integrity (i.e., emergency corrective measures). Corrections initiated prior to Executive Officer approval shall be so stated in the written report. The written report shall contain a description of the noncompliance and its cause; the period of noncompliance including exact dates and times or anticipated duration; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. This provision includes, but is not limited to:[a]

    a. violation of a discharge prohibition;

    b. violation of treatment system's discharge limitation;

    c. slope failure; and

    d. leachate seep occurring on, or in proximity to, the Landfill which result in a discharge of leachate to surface waters or to ponded areas.

41. The leachate collection and removal system (LCRS) shall:

    a. be designed and constructed, to the satisfaction of the Executive Officer, to prevent the development of hydraulic head on the liner; and

    b. convey to a sump, or other appropriate collection area, all leachate reaching the liner. The LCRS shall not rely upon unlined or clay-lined areas for leachate conveyance.[a]

Closure

42. All Landfill areas at final elevations, which will not receive additional refuse in the future, shall receive a final cover which is designed and constructed to function with the minimum maintenance possible. Landfill areas shall be graded to a slope of at least 3%, but not more than 10% unless adequate erosion control measures are implemented. Final cover shall be protected or designed and constructed to prevent wind and water erosion and minimize moisture infiltration. The final cover must have a permeability less than or equal to the permeability of the bottom liner system or natural subsoils, or no greater than 1×10^{-6} cm/sec, whichever is less. The Discharger shall ensure the final cover meets all prescriptive and/or performance standards as specified in Chapter 15, Title 14, and Subtitle D regulations.[a]

43. The Discharger shall implement final closure activities as the site operation progresses (e.g., within 30 days after a particular Unit or portion of a Unit reaches final fill elevation, final closure cover must be provided), in accordance with requirements consistent with the closure of the entire site, as approved by the Executive Officer and the CIWMB in accordance with the most recently approved closure plan.[a,b]

44. Alternative intermediate and final cover designs may be considered for Executive Officer approval, if such designs provide equivalent reduction in infiltration and protection from wind and water erosion.[a,b]

45. Methane and other landfill gases and vapors shall be vented, extracted or otherwise controlled to prevent explosions, adverse health effects, nuisance conditions, and/or the impairment of beneficial uses of water due to migration through the vadose (unsaturated) zone. Discharger shall comply with gas control requirements pursuant to Title 14 regulations.[a,b]

Site Specific

46. Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule, shall be submitted within 14 days following each scheduled date unless otherwise specified within the Order. If reporting noncompliance, the report shall include a description of the reason, a description and schedule of tasks necessary to achieve compliance, and an estimated date for achieving full compliance. A second report shall be submitted within 14 days of full compliance.[e]

47. Reports shall be submitted in advance of any planned changes in the permitted facility or in an activity which could potentially or actually result in noncompliance.

48. Treated ground water applied to the Landfill for irrigation/dust control shall not exceed the moisture holding capacity of the soil, or infiltrate past the root zones of vegetation.[a]

49. Waste containment barriers shall be maintained to ensure their effectiveness.

C. WATER QUALITY PROTECTION STANDARDS

1. Water Quality Protection Standard (WQPS or Standard). The five parts of the Water Quality Protection Standard [Standard] of §2550.2 of Article 5 are as follows:

   a. Constituents of Concern [§2550.3]. The list of Constituents of Concern (1) for water-bearing media [i.e., ground water, surface water, and soil pore liquid] consists of all constituents in Appendix II of 40 CFR Part 258 in addition to Total Dissolved Solids (TDS), Sulfate, Carbonate, pH, and Chloride, and (2) for soil pore gas consists of all volatile organic compounds [VOC] detectable via gas chromatography. Constituents of Concern, and many other terms of Article 5 used in this Order, are defined in MRP No. 93-69, Part III.B., which program is hereby incorporated by reference.

   b. Concentration Limits [§2550.4]. For each Monitoring Point assigned to a Detection Monitoring Program [MRP Part I.D.4.], the Concentration Limit for each Constituent of Concern [or Monitoring Parameter] shall be its background value as obtained during that Reporting Period [defined in MRP No. 93-69, Part III.B.], as follows:

      (1) If 10% or more of the samples taken during a given Reporting Period from the Background Monitoring Points for a monitored medium exceed their respective Facility-Specific Method Detection Limit [MDL]" (see MRP Part III.B.) for a given constituent, then the Concentration Limit for that medium and constituent shall consist of the mean [or median, as appropriate] and standard deviation [or other measure of central tendency, as appropriate] of all the background data obtained for that

constituent from that medium during that Reporting Period; otherwise

(2) the Concentration Limit for that medium and constituent shall be its MDL.

c. **Monitoring Points and Background Monitoring Points for Detection and Corrective Action Monitoring** shall be those listed in MRP Part I.D.4.

d. **Point of Compliance.** The Point of Compliance follows the edge of the Landfill's "Designated Disposal Area" as shown on Attachment B, and extends vertically down through the uppermost aquifer.[a]

e. **Compliance Period**. The estimated duration of the Compliance Period for this Unit is fifty-five years. Each time the Standard is exceeded (i.e., a release is discovered), the Landfill begins a Compliance Period on the date the Board directs the Discharger to begin an Evaluation Monitoring Program. If the Discharger's Corrective Action Program (CAP) has not achieved compliance with the Standard by the scheduled end of the Compliance Period, the Compliance Period is automatically extended until the Unit has been in continuous compliance for at least three consecutive years.[a]

2. **Monitoring Parameters for Detection Monitoring.** The monitoring parameters for water and soil pore gas shall be selected to ensure early detection of a contaminant release. The monitoring parameters for detection monitoring are listed in MRP Part I.D.2.

3. **Additional Monitoring Points or Background Monitoring Points.** The Discharger shall, in a timely fashion, install any additional ground water, soil pore liquid, soil pore gas, or leachate monitoring devices required to fulfill the terms of any Discharge Monitoring Program issued by the Executive Officer.

4. The concentrations of indicator parameters or waste constituents in waters passing through the Points of Compliance shall not exceed the "Water Quality Protection Standards" (WQPS) established pursuant to Monitoring and Reporting Program No. 93-80, which is attached to and made part of this Order.[a]

5. Discharge shall not cause a statistically significant increase of mineral constituent concentrations in underlying ground water.

6. Discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board.

7. Discharge shall not cause concentrations of chemicals and radionuclides in ground water to exceed limits set forth in Title 22, Chapter 15, Articles 4 and 5 of the California Code of Regulations.

8. Discharge of waste shall not cause ground water in downgradient wells to exceed the State Department of Health Services latest recommended Drinking Water Action Levels.

D. PROVISIONS

1. Discharger shall comply with "Monitoring and Reporting Program No. 93-80", as specified by the Executive Officer.

2. The Discharger shall maintain a copy of this Order at the Landfill and make it available at all times to regulatory agency personnel and to facility operating

personnel. The Discharger shall familiarize operating personnel of the requirements and contents of this Order.

3. Discharger shall comply with all other applicable provisions of Chapter 15, Title 14, and Subtitle D that are not specifically referred to in this Order. If any applicable regulation requirements overlap or conflict in any manner, the most conservative requirement shall govern in all cases, unless specifically stated otherwise in this Order, or as directed by the Executive Officer.

4. The Discharger shall maintain legible records of the quantity and type of each waste discharged at each waste management unit and the manner and location of discharge. Such records shall be maintained at the Landfill, or other Executive Officer approved location, until the beginning of the post-closure maintenance period. These records shall be available for review by representatives of the Board and of the State Water Resources Control Board at any time during normal business hours. At the beginning of the post-closure maintenance period, copies of these records shall be sent to the Board.[a]

5. The Discharger shall be responsible for accurate waste characterization, including determinations of whether or not wastes will be compatible with containment features or other wastes and whether or not wastes are required to be managed as hazardous wastes.[a]

6. A list of the general types of the more widely used names of hazardous-type wastes prohibited at this site shall be posted on a legible roadway sign at the entrance in both English and Spanish. The sign shall also state the penalties for illegal dumping. A handout which includes a specific list of Hazardous Wastes and other types of materials prohibited at this Landfill and the location(s) of the nearest hazardous waste disposal facilities, shall be provided to commercial waste haulers that use this Landfill and shall be available to all other site users upon request.

7. The Discharger shall have a continuing responsibility to assure protection of usable waters from discharged waste and from gases and leachate generated by discharged waste during the Landfill's active life, closure, and post-closure maintenance period, and during subsequent use of the property for other purposes. This Board considers the Discharger to have an on-going responsibility for correcting problems resulting from this waste discharge.

8. The Discharger or persons employed by the Discharger shall comply with all notice and reporting requirements of the State Water Resources Control Board with regard to construction, alteration, destruction, or abandonment of all monitoring wells used for compliance with this Order or with the most recent version of the Monitoring and Reporting Program, as required by Section 13750 through 13755 of the California Water Code.[f]

9. The Discharger shall notify the Board in writing of any proposed change in ownership or responsibility for construction or operation of the facility. This notification shall be given at least 90 days prior to the effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with these WDRs. In the event of any change in ownership of this waste management facility, the Discharger shall notify the succeeding owner or operator, in writing, of the existence of this Order. A copy of that notification shall be sent to the Board.[a]

10. To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Board, and a statement. The statement shall indicate that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request is a violation of the California Water Code (i.e., discharge without requirements). Transfer may be approved or disapproved in writing by the Executive Officer.[f]

11. The Discharger shall submit to the Regional Board and the California Integrated Waste Management Board (CIWMB) for approval a closure and post-closure maintenance plan (Closure Plan) by September 9, 1994, describing the methods and controls to be used to assure protection of the quality of surface and ground waters of the area during partial and final closure operations and during any proposed subsequent use of the land. The Closure Plan must include:[a]

    a. a description of the final cover, designed in accordance with all applicable State and Federal regulations and the methods and procedures to be used to install the cover;

    b. an estimate of the largest area of the MSW landfill Unit ever requiring a final cover at any time during the active life;

    c. an estimate of the maximum inventory of wastes disposed over the active life of the landfill facility;

    d. a schedule for completing all activities necessary to satisfy all closure criteria as required by Chapter 15, Title 14, and Subtitle D regulations;

    e. an estimate of closure and post closure maintenance costs;

    f. a proposal for an enterprise fund or equivalent financial arrangement to provide sufficient funding for closure and post-closure maintenance; and

    g. the amount to be deposited in the trust fund or equivalent financial arrangement each year.

    h. a description of the final landfill configuration.

    The Closure Plan shall be updated annually, and revisions submitted to the Regional Board by the 1st day of February of each year starting in 1996. The method identified for each Units' closure and to maintain protection of the quality of surface and ground waters shall comply with waste discharge requirements established by the Regional Board. Such Waste Discharge Requirements must reflect the most current version of the Closure Plan. The Closure Plan report shall be consistent with all applicable State and Federal regulations, including Chapter 15, Title 14, and Subtitle D. If the Closure Plan requires updating prior to final closure, an updated plan shall be submitted at least 180 days prior to final closure.

12. The Discharger shall notify the Board at least 180 days prior to beginning any partial or final landfill closure activities. The notice shall include a statement that all closure activities will conform to the most recently approved Closure Plan and that the Plan provides for closure in compliance with all applicable state and federal regulations. If there is no approved Closure Plan, the Discharger shall submit a complete Closure Plan at least 240 days prior to beginning any anticipated Landfill closure activities.

13. The Discharger shall notify the Board of a material change in the character, location, or volume of the waste discharge and of any proposed expansions or closure plans. Notice shall include information on the quality and quantity of waste discharge and the anticipated impact of the waste upon water quality and Landfill operations. This notification shall be given at least 120 days prior to the proposed effective date of the change and shall be accompanied by an amended Report of Waste Discharge and any technical documents that are needed to demonstrate continued compliance with this Order.[a]

14. The Discharger shall submit to the Executive Officer for review and approval a periodic load-checking program. The load checking program shall be adequately designed to ensure that "hazardous wastes" and "designated wastes" are not discharged to the WMU. The load checking program shall be submitted by May 1, 1994. The program shall include, but not be limited to:[a]

    a. the number of random loads to be checked per month and/or year;

    b. training program for on-site personnel;

    c. record keeping and reporting program;

    d. program implementation schedule;

    e. alternatives for waste found to not be in compliance with these waste discharge requirements; and

    f. sign posting at the facility.

15. The Discharger shall immediately notify the Board of any flooding, equipment failure, slope failure, or other change in site conditions which could cause violation of this Order or which could impair the integrity of wastes or leachate containment facilities or of precipitation and drainage control structures.

16. The Discharger shall report to the Executive Officer all changes in usage of daily cover and performance standards within five business days following the desired change.

17. Prior to May 1, 1994, the Discharger shall submit a current Site Operations and Development Plan, consistent with Section 2596 of Chapter 15, for approval by the Executive Officer which includes: a description of current storage and disposal methods; contingency plans for failure or breakdown of waste handling facilities or containment systems, including notice of any such failure (or any detection of waste or leachate in monitoring facilities) to the Board, local governments, and water users downgradient of waste management units; and description of inspection and maintenance programs which will be undertaken regularly during disposal operations and the post-closure maintenance period.

18. The Discharger shall submit a complete liner system design report for Executive Officer consideration of any new WMU use and construction, at least 180 days prior to WMU development. The design report shall adequately address any proposed deviation from the most currently approved fill sequencing plan. It must adequately address all applicable requirements of state (Chapter 15 and Title 14) and federal (Subtitle D) landfill regulations.[a]

19. With each quarterly monitoring report, the Discharger shall address compliance with all terms of this Order. The report shall include a detailed implementation schedule for all work required by this Order.

20. If the Discharger or the Board, through a detection monitoring program, verifies that Water Quality Protection Standards (WQPS) have been exceeded at or beyond the Points of Compliance and the horizontal and vertical

extent of pollution has been determined, the Discharger shall notify or acknowledge the Board's findings in writing within seven days. Within 180 days, the Discharger shall submit to the Board an amended Report of Waste Discharge (ROWD) for establishment of a corrective action program per Section 2550.10 of Chapter 15, which is designed to achieve compliance with the WQPS.[a]

21. The Discharger shall obtain and maintain the following Financial Assurance Instrument (Instrument) until the end of the Post-Closure Maintenance Period. The Discharger intends to utilize an Enterprise Fund in general conformance with the guidelines contained in Title 14, CCR, Section 18285. The Discharger shall submit a report every five years that either validates the Instrument's ongoing viability or proposes and substantiates any needed changes [e.g., a documented increase in the monitoring systems' ability to provide reliable early detection of a release can cause a decrease in the Instrument's financial coverage]. The first report is due by November 1, 1994 and subsequent reports are due every five years thereafter.[ab]

22. At any time, the Discharger may file a written request [including appropriate supporting documents] with the Executive Officer, proposing modifications to the Monitoring and Reporting Program. The request may address changes (a) to any statistical method, non-statistical method, or retest method used with a given constituent or parameter, (b) to the manner of determining the background value for a constituent or parameter, (c) to the method for displaying annual data plots, (d) to the laboratory analytical method used to test for a given constituent or parameter, (e) to the media being monitored [e.g., the addition of soil pore gas to the media being monitored], (f) to the number or placement of Monitoring Points or Background Monitoring Points for a given monitored medium, or (g) to any aspect of monitoring or QA/QC. After receiving and analyzing such a report, the Executive Officer either may reject the proposal for reasons listed, or may incorporate it, along with any necessary changes, into the attached Monitoring and Reporting Program (MRP). The Discharger shall implement any changes in the MRP specified by the Executive Officer.[a]

23. The Discharger shall continue, and expand when appropriate, "evaluation" and "corrective action" monitoring programs. The goal of evaluation monitoring is to determine the extent of contamination. Corrective action monitoring is performed to demonstrate corrective action effectiveness.

24. The Discharger shall maintain waste containment facilities and precipitation and drainage controls, and shall continue to monitor, as appropriate, ground water, leachate, soil pore gas and liquids, and surface waters per the current version of the MRP throughout the post-closure maintenance period.[a]

25. Except for data determined to be confidential under Section 13267(b) of the California Water Code, all reports prepared in accordance with this Order shall be available for public inspection at the office of the Regional Board.[f]

26. All reports shall be signed as follows:[e]

    a. for a corporation; by a principal executive officer of at least the level of vice president;

    b. for a partnership or sole proprietorship; by a general partner or the proprietor, respectively;

    c. for a public agency; by either a principal executive officer, a ranking elected official, or their "duly authorized representative."

d. Engineering reports; by a California Registered Civil Engineer or Certified Engineering Geologist.

27. Any person signing a report makes the following certification, whether it's expressed or implied:[c]

> "I certify under penalty of perjury I have personally examined and am familiar with the information submitted in this document and all attachments and, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the information is true, accurate, and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

28. The post-closure maintenance period shall continue until the Board determines that remaining wastes in the Landfill will not threaten water quality.[a]

29. Compliance with this Order does not alleviate compliance with permits or orders of other regulatory agencies. This Order is not intended to prevent implementation of more stringent or restrictive requirements imposed by any other agency.

30. The Board may review this Order periodically and will revise these requirements when necessary.

31. The Discharger shall submit a "Wet Weather Preparedness Report" by November 1, of each year. The report must address, in detail, compliance with all wet weather preparedness requirements of this Order, and all other relevant Chapter 15, Title 14, and Subtitle D criteria.

32. By May 1, 1994, the Discharger shall submit a "Report of Monitoring Feasibility" addressing the feasibility of soil pore gas and liquid monitoring, and expansion of ground water monitoring. The report shall include a workplan and time schedule for installing a monitoring system which includes "point of compliance" and "background" monitoring points for all monitored media potentially under the influence of the Landfill. If gas and/or water monitoring is infeasible at any "point of compliance" or "background" monitoring point, the report shall explain why. The monitoring program shall be consistent with Chapter 15 and Subtitle D.

33. Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of section 13267 of the California Water Code, or falsifying any information provided therein, is guilty of a misdemeanor.[c]

34. The Discharger and/or any person who violates waste discharge requirements and/or who intentionally or negligently discharges waste, causes or permits waste to be deposited where it is discharged to waters of the state, may be liable for civil and/or criminal remedies, as appropriate, pursuant to the California Water Code.[c]

35. Order No. 91-26 Waste Discharge Requirements for "Lompoc Class III Landfill" adopted by the Board on March 8, 1991, is hereby rescinded.

36. Pursuant to Title 23, Division 3, Chapter 9, of the California Code of Regulations (CCR), the Discharger shall submit a written report to the Executive Officer not later than May 12, 1988, which:

    a. Discusses whether there will be changes in the continuity, character, location, or volume of the discharge;

b. Discusses whether any portion of this Order is incorrect, obsolete, or otherwise in need of revision;

c. Addresses all other applicable sections of Article 9, Chapter 15.

I, **WILLIAM R. LEONARD**, Executive Officer, do hereby certify the foregoing is full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coastal Region, on **November 16, 1993**.

William R. Leonard
Executive Officer

b. Discusses whether any portion of this Order is incorrect, obsolete, or otherwise in need of revision;

c. Addresses all other applicable sections of Article 9, Chapter 15.

I, **WILLIAM R. LEONARD**, Executive Officer, do hereby certify the foregoing is full, true, and correct copy of an order adopted by the California Regional Water Quality Control Board, Central Coastal Region, on **November 16, 1993**.

William R. Leonard

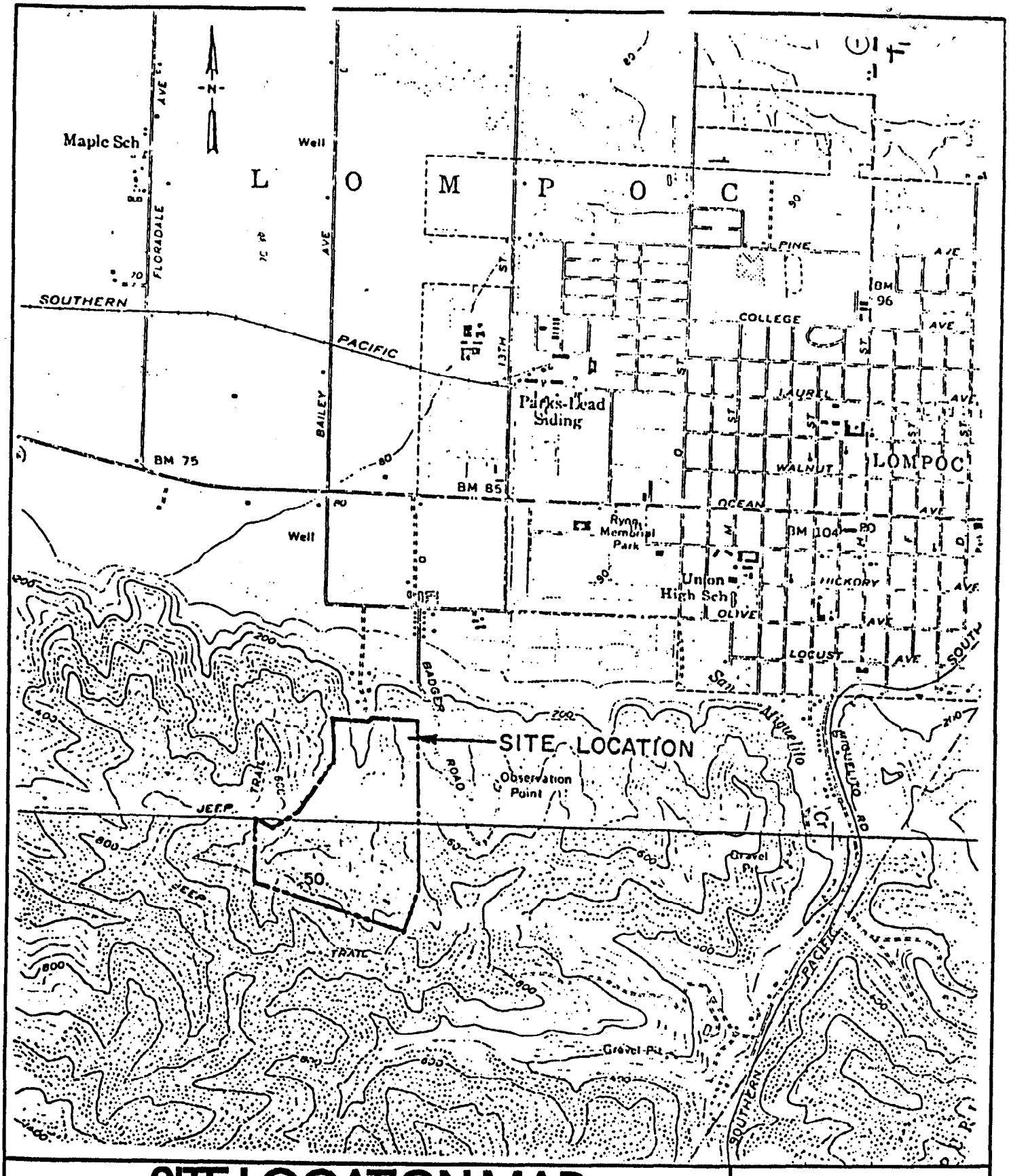
Executive Officer

Report and Implementation Date Summary

The Discharger shall comply with the following submittal and implementation schedule for all tasks and/or reports required by this Order:

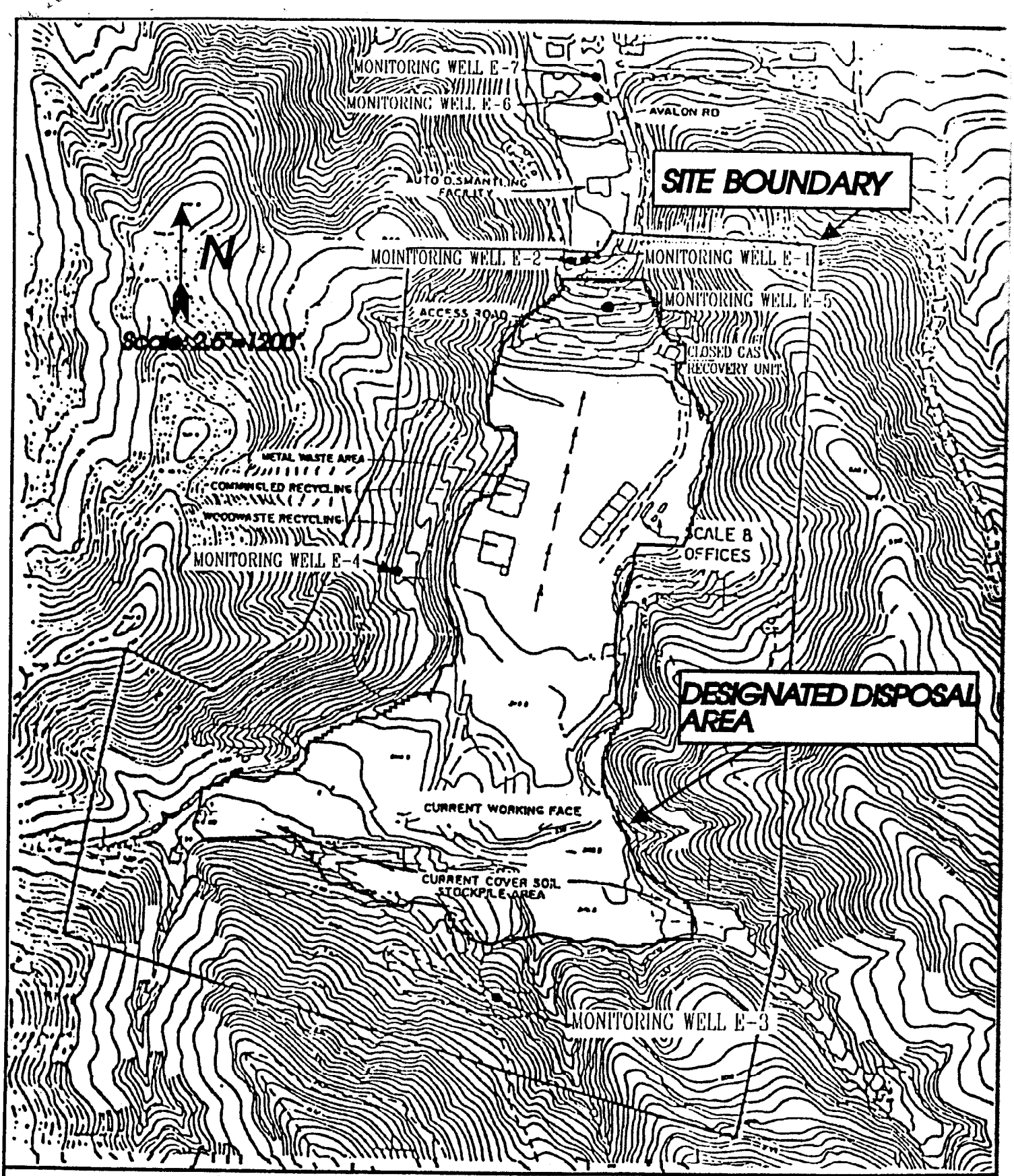
Task/Report:	Implementation/Due Date:
Load Checking Program [Provision D.14.]	May 1, 1994
Site Operations Plan [Provision D.17.]	May 1, 1994
Technical Compliance Report [Provision D.19.]	Quarterly Monitoring Report
Report of Monitoring Feasibility [Provision D.32.]	May 1, 1994
Financial Assurance Report [Provision D.21.]	May 1, 1994, and every 5 years thereafter
Updated Closure Plan [Provision D.11.]	September 9, 1994 and yearly updates due beginning February 1, 1996
Minimum one foot cover over Landfill [Specification B.27.]	November 1 of each year
Runoff diversion and erosion prevention [Specification B.19.]	November 1 of each year
Wet Weather Preparedness Report [Provision D.31.]	November 1 of each year
Changes to Landfill [Provision D.36.]	May 12, 1998

WA:sg - LOMPOC2.WDR



SITE LOCATION MAP
LOMPOC LANDFILL

CRWQCB	
8/19/93	
ATTACHMENT A	WDR 93-80



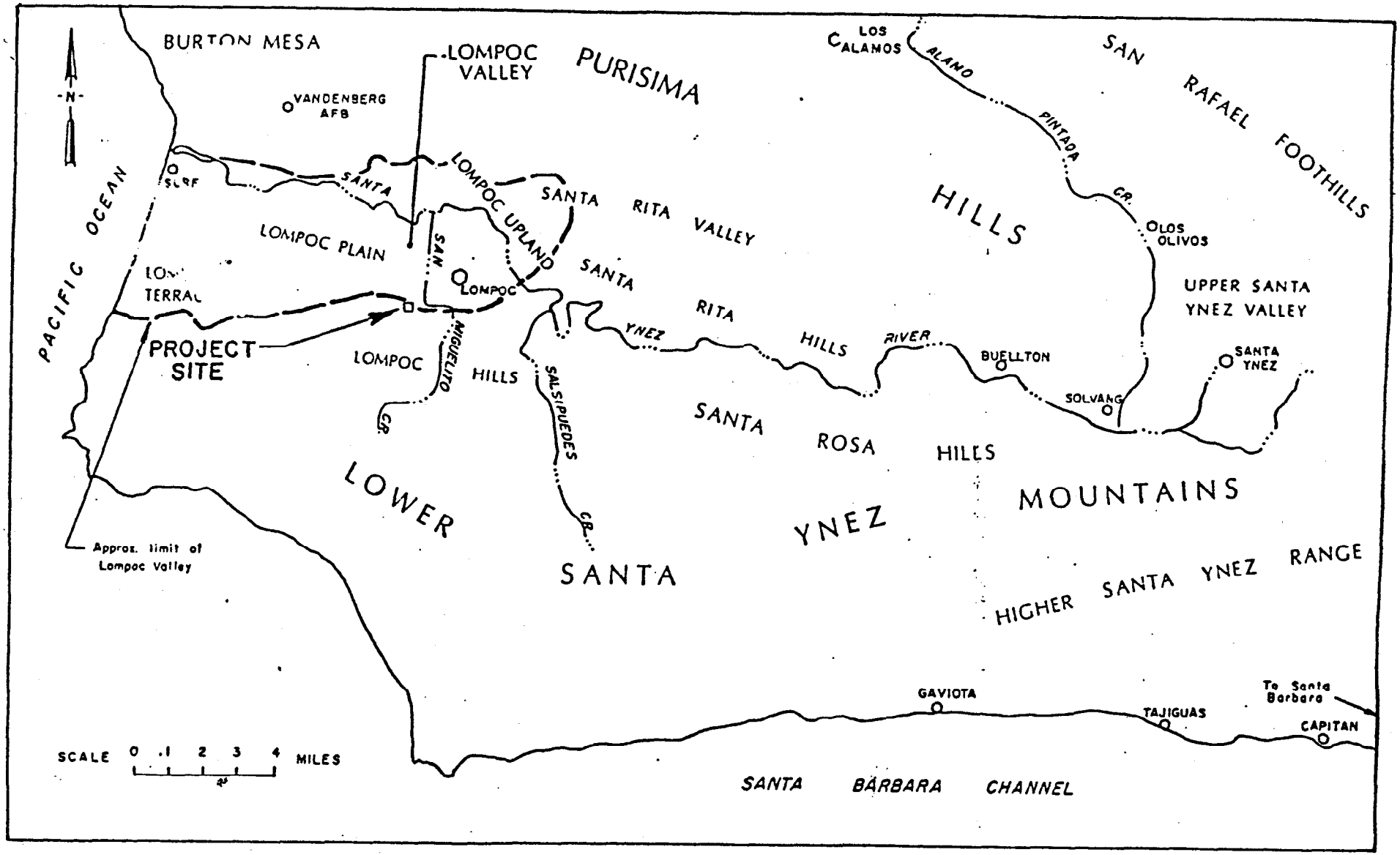
DISPOSAL SITE
LOMPOC LANDFILL

CRWQCB

8/19/93

ATTACHMENT B

WDR 93-80



ATTACHMENT C

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL COAST REGION

81 Higuera Street, Suite 200
San Luis Obispo, California 93401-5427

MONITORING AND REPORTING PROGRAM NO. 93-80
FOR
CITY OF LOMPOC
CLASS III LANDFILL
SANTA BARBARA COUNTY

TABLE OF CONTENTS

Part I: MONITORING AND OBSERVATION SCHEDULE

A. **WASTE MONITORING** -- Report Twice Annually, as part of the Monitoring Report (Spring/Winter and Summer/Fall Reporting Periods end on March 31 and September 30, respectively) Reporting Periods end on March 31, June 30, September 30, and December 31, respectively)

1. Record the total volume and weight of refuse, ash, and sludge [in cubic yards or tons] disposed of at the site during each reporting period, showing locations and dimensions on a sketch or map.

2. Record the type, volume, and nature of any waste refused; basis for refusal, name, address, and telephone number of hauler; date and time of log entry; and ultimate destination of refused waste, if known.

3. Site personnel shall advise waste haulers of the types of wastes prohibited at the site and shall make periodic detailed compliance checks of wastes discharged by all site users. These detailed periodic checks shall be of variable frequency, but average once per working week. Records of the intake waste check, including name, address, phone, and company, shall be maintained on file in the Discharger's office for inspection by Regional Board staff.

4. Remaining capacity of landfill or landfill unit shall be reported annually. Data shall be included in the Annual Report. This capacity shall be reported in cubic yards and remaining capacity in years.

B. **DRAINAGE SYSTEMS INSPECTION** -- Report Twice Annually, as part of the Monitoring Report (Winter/Spring and Summer/Fall Reporting Periods end on June 30 and December 30, respectively).

Drainage Systems Inspection. The Discharger shall inspect all drainage control systems following each storm event which results in rainfall runoff and at least monthly. The report shall contain the following information:

1. Whether storm retention basins and drainage ditches contain liquids;

2. Any apparent seeps from the basins or the waste management unit;

3. General conditions of facilities; and

4. Steps taken, including dates to correct any problems found during inspection and when taken.

C. **ON-SITE OBSERVATIONS** -- Report Twice Annually, as part of the Monitoring Report (Spring and Fall Reporting Periods end on March 31 and September 30, respectively).

Monthly inspections along the perimeter and within the Designated Disposal Area, consistent with the Standard Observations defined in Part III.B.5 of this MRP, are required. On-site observations and drainage system inspections may be combined if appropriate.

D. WATER AND SOIL PORE GAS SAMPLING/ANALYSIS FOR DETECTION -- Monitoring Parameter Report due Twice Annually, Constituent of Concern Reports due every five years (details below):

1. Thirty-Day Sample Procurement Limitation. For any given monitored medium, the samples taken from all Monitoring Points and Background Monitoring Points to satisfy the data analysis requirements for a given Reporting Period shall all be taken within a span not exceeding 30 days, and shall be taken in a manner that ensures sample independence to the greatest extent feasible [§2550.7(e)(12)(B) of Article 5]. Ground water sampling shall also include an accurate determination of the ground water surface elevation and field parameters [temperature, electrical conductivity, turbidity] for that Monitoring Point or Background Monitoring Point [§2550.7(e)(13)]; ground water elevations taken prior to purging the well and sampling for Monitoring Parameters shall be used to fulfill the Spring, Summer, Winter, and Fall ground water flow rate/direction analyses required under Part I.E.6. Statistical or non-statistical analysis shall be carried out as soon as the data is available, in accordance with Part II of this program.

2. "Indirect Monitoring" for Monitoring Parameters Done Quarterly. For each monitored medium, all Monitoring Points assigned to Detection and Corrective Action Monitoring [Part I.D.4., below] and all Background Monitoring Points shall be monitored once each Spring, Summer, Fall, and Winter [Spring, Summer, Fall, and Winter Reporting Periods end on March 31, June 30, September 30, and December 31, respectively] for all Monitoring Parameters. The Monitoring Parameters for all water bearing media shall include:

   Volatile Organic Compounds (Appendix I of Subtitle D)
   pH
   Total Dissolved Solids (TDS)
   Sulfate
   Nitrate
   Electric Conductivity (EC)
   Manganese
   Sodium
   Dissolved Oxygen (DO)

   The Monitoring Parameters for gas bearing media shall include:

   Volatile Organic Constituents
   Methane
   Carbon Dioxide

   Monitoring for Monitoring Parameters shall be carried out in accordance with Part I.D.1. and Part II of this Program.

3. "Direct Monitoring" of All Constituents of Concern Every Five Years. In the absence of a release being indicated (1) pursuant to Parts I.D.2. and II.A.3. for a Monitoring Parameter, (2) based upon physical evidence pursuant to Part III.D.2.c., or (3) by a study required by the Executive Officer based upon anomalies noted during visual inspection of graphically-depicted analytical data [Part III.D.3.a.], the Discharger shall sample all Monitoring Points and Background Monitoring Points for water-bearing media -- not including soil pore gas -- for all Constituents of Concern in Appendix II of CFR 40 part 258 every fifth year. Sampling shall begin with the year of adoption of this revised Order, with successive direct monitoring efforts being carried out alternately in the Spring of one year [Reporting Period

ends March 31] and the Fall of the fifth year thereafter [Reporting Period ends September 30]. Direct monitoring for Constituents of Concern shall be carried out in accordance with Parts I.D.1. and II of this Program, and shall encompass only those Constituents of Concern that do not also serve as a Monitoring Parameter.

4. Monitoring Points and Background Monitoring Points For Each Monitored Medium: The Discharger shall sample the following Monitoring Points and Background Monitoring Points in accordance with the sampling schedules given under Parts I.D.2. and I.D.3. [immediately foregoing], taking enough samples to qualify for the most appropriate test under Part II:

   a. For the ground water in the alluvial canyon fill: This aquifer underlies the northern part of the Landfill. The "Detection" monitoring points include wells E1, E5, E6, and E7. E1 shall serve as "Point of Compliance".

   b. For the ground water in the upper Monterey formation: The convergent boundary of the Sisquoc Formation and the Upper Monterey Formation is at the southern edge of the site. Well E3 is the only well in this formation and shall serve as a "Detection" monitoring point.

   c. For the ground water in the Sisquoc Formation: This aquifer underlies the northern half of the Landfill and the alluvial fill. The "Detection" monitoring" points are wells E2, E4, E5, and E7. Well E7 shall serve as point of compliance.

   d. For the unsaturated zone beneath and adjacent to the Landfill: No permanent gas or soil pore liquid monitoring points have been established, but may be in the future if feasible.

   e. For the surface water in the canyon water shed. The monitoring points are at the northern site boundaries were the storm water drainage pipes exit. The background monitoring points are at the southern boundaries of the site were two adjacent canyons drain into the Landfills' canyon.

5. Initial Background Determination: For the purpose of establishing an initial pool of background data for each Constituent of Concern at each Background Monitoring Point in each monitored medium [§2550.7(e)(6)]:

   a. Whenever a new Constituent of Concern is added to the Water Quality Protection Standard, including any added by the adoption of this Order, the Discharger shall collect at least one sample quarterly for at least one year from each Background Monitoring Point in each monitored medium and analyze for the newly-added constituent(s); and

   b. Whenever a new Background Monitoring Point is added, including any added by this Order, the Discharger shall sample it at least quarterly for at least one year, analyzing for all Constituents of Concern and Monitoring Parameters.

6. Quarterly Determination of Ground Water Flow Rate/Direction [§2550.7(e)(15) of Article 5]: The Discharger shall measure the water level in each well and determine ground water flow rate and direction in each ground water body described in Part I.D.4. at least quarterly, including the times of expected highest and lowest elevations of the water level for the respective ground water body. This information shall be included in the Quarterly monitoring reports required under Part I.D.2.

Part II: STATISTICAL AND NON-STATISTICAL ANALYSIS OF SAMPLE DATA DURING A DETECTION AND CORRECTIVE ACTION MONITORING PROGRAM

A. The Discharger shall use the following methods to compare the downgradient concentration of each monitored constituent or parameter with its respective background concentration to determine if there has been a release from the Unit. For any given data set, proceed sequentially down the list of statistical analysis methods listed in Part II.A.1., followed by the non-statistical method in Part II.A.2., using the first method for which the data qualifies. If that analysis tentatively indicates the detection of a release, implement the retest procedure under Part II.A.3.

1. Statistical Methods. The Discharger shall use one of the following statistical methods to analyze Constituents of Concern or Monitoring Parameters which exhibit concentrations exceeding their respective MDL in at least ten percent of the background samples taken during that Reporting Period. Except for pH, which uses a two-tailed approach, the statistical analysis for all constituents and parameters shall be one-tailed [testing only for statistically significant increase relative to background]:

   a. One-Way Parametric Analysis of Variance (ANOVA), followed by multiple comparisons [§2550.7(e)(8)(A)]. This method requires at least four independent samples from each Monitoring Point and Background Monitoring Point during each sampling episode. It shall be used when the background data for the parameter or constituent, obtained during a given sampling period, has not more than 15% of the data below the PQL. Prior to analysis, replace all "trace" determinations with a value halfway between the PQL and the MDL values reported for that sample run, and replace all "non-detect" determinations with a value equal to half the MDL value reported for that sample run. The ANOVA shall be carried out at the 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis [i.e., that there is no release] to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated for that parameter or constituent;

   b. One-Way Non-Parametric ANOVA (Kruskal-Wallis Test), followed by multiple comparisons. This method requires at least nine independent samples from each Monitoring Point and Background Monitoring Point; therefore, the Discharger shall anticipate the need for taking more than four samples per Monitoring Point, based upon past monitoring results. This method shall be used when the pooled background data for the parameter or constituent, obtained within a given sampling period, has not more than 50% of the data below the PQL. The ANOVA shall be carried out at the 95% confidence level. Following the ANOVA, the data from each downgradient Monitoring Point shall be tested at a 99% confidence level against the pooled background data. If these multiple comparisons cause the Null Hypothesis (i.e., that there is no release) to be rejected at any Monitoring Point, the Discharger shall conclude that a release is tentatively indicated for that parameter or constituent;

or

c. Method of Proportions. This method shall be used if the "combined data set" -- the data from a given Monitoring Point in combination with the data from the Background Monitoring Points -- has between 50% and 90% of the data below the MDL for the constituent or parameter in question. This method (1) requires at least nine downgradient data points per Monitoring Point per Reporting Period, (2) requires at least thirty data points in the combined data set, and (3) requires that $n * P > 5$ [where n is the number of data points in the combined data set and P is the proportion of the combined set that exceeds the MDL]; therefore, the Discharger shall anticipate the number of samples required, based upon past monitoring results. The test shall be carried out at the 99% confidence level. If the analysis results in rejection of the Null Hypothesis [i.e., that there is no release], the Discharger shall conclude that a release is tentatively indicated for that constituent or parameter; or

d. Dr. Given's Nonparametric Prediction Limits. For ground water monitoring, this method will require at least 16 background samples for a 95% confidence level if three background well are monitored. For surface water monitoring this method will require at least 9 background samples for a 95% confidence interval if one background monitoring point is used.

2. Non-Statistical Method. The Discharger shall use the following non-statistical method for the VOC_{water} and VOC_{spg} Composite Monitoring Parameters and for all Constituents of Concern which are not amenable to the statistical tests under Part II.A.1; each of these groupings of constituents utilizes a separate variant of the test, as listed below. Regardless of the variant used, the method involves a two-step process: [1] from all constituents to which the variant applies, compile a list of those constituents which exceed their respective MDL in the downgradient sample, yet do so in less than ten percent of the applicable background samples; and [2] evaluate whether the listed constituents meet either of two possible triggering conditions. For each Monitoring Point, the list shall be compiled based on either (1) the data from the single sample [for that constituent] taken during that Reporting Period from that Monitoring Point, or (2) [where several independent samples have been analyzed for that constituent at a given Monitoring Point] from the sample which contains the largest number of constituents. Background shall be represented by the data from all samples taken from the appropriate Background Monitoring Points during that Reporting Period [at least one sample from each Background Monitoring Point]. The method shall be implemented as follows:

a. For the Volatile Organics Composite Monitoring Parameter For Water Samples [VOC_{water}]: For any given Monitoring Point, the VOC_{water} Monitoring Parameter is a composite parameter addressing all VOCs detectable using USEPA Methods 8010 and 8020, including all unidentified peaks. Compile a list of each VOC which (1) exceeds its MDL in the Monitoring Point sample [an unidentified peak is compared to its presumed MDL], and also (2) exceeds its MDL in less than ten percent of the samples taken during that Reporting Period from that medium's Background Monitoring Points. The Discharger shall conclude that a release is tentatively indicated for the VOC_{water} Composite Monitoring Parameter if the list either (1) contains two or more constituents, or (2) contains one constituent that exceeds its PQL;

b. For the Volatile Organics Composite Monitoring Parameter For Soil Pore Gas Samples [VOC_{spg}]: The VOC_{spg} Monitoring Parameter is a composite parameter for soil pore gas addressing at least all 47 VOCs listed in Appendix I to 40 CFR 258, based upon either GC or GC/MS analysis of at least a ten liter sample of soil pore gas (e.g., collected in a vacuum canister). It involves the same scope of VOCs as does the VOC_{spg} Monitoring Parameter. Compile a list of each VOC which (1) exceeds its MDL in the Monitoring Point sample [an unidentified peak is compared to its presumed MDL], and also (2) exceeds its MDL in less than ten percent of the samples taken during that Reporting Period from the [soil-pore gas] Background Monitoring Points. The Discharger shall conclude that a release is tentatively indicated for the VOC_{spg} Composite Monitoring Parameter if the list either (1) contains two or more constituents, or (2) contains one constituent that exceeds its PQL; or

c. For Constituents of Concern: Compile a list of constituents that exceed their respective MDL at the Monitoring Point yet do so in less than ten percent of the background samples taken during that reporting period. The Discharger shall conclude that a release is tentatively indicated if the list either (1) contains two or more constituents, or (2) contains one constituent which exceeds its PQL.

3. Discrete Retest [§2550.7(e)(8)(E) of Article 5]. In the event that the Discharger concludes that a release has been tentatively indicated [under Parts II.A.1. or II.A.2.], the Discharger shall -- within 30 days of this indication -- collect two new suites of samples for the indicated Constituent(s) of Concern or Monitoring Parameter(s) at each indicating Monitoring Point, collecting at least as many samples per suite as were used for the initial test. Resampling of the Background Monitoring Points is optional. As soon as the data is available, the Discharger shall rerun the statistical method [or non-statistical comparison] separately upon each suite of retest data. For any indicated Monitoring Parameter or Constituent of Concern at an affected Monitoring Point, if the test results of either [or both] of the retest data suites confirms the original indication, the Discharger shall conclude that a release has been discovered. All retests shall be carried out only for the Monitoring Point(s) for which a release is tentatively indicated, and only for the Constituent of Concern or Monitoring Parameter which triggered the indication there, as follows:

a. If an ANOVA method was used, the retest shall involve only a repeat of the multiple comparison procedure, carried out separately on each of the two new suites of samples taken from the indicating Monitoring Point;

b. If the Method of Proportions statistical test was used, the retest shall consist of a full repeat of the statistical test for the indicated constituent or parameter, using the new sample suites from the indicating Monitoring Point;

c. If Dr. Gibbons Method was used, the retest shall consist of two new suites of data which will be retested for the detected constituents.

d. If the non-statistical method was used:

1) Because the VOC Composite Monitoring Parameters [VOC_{water} or VOC_{spg}] each address, as a single parameter, an entire family of constituents which are likely to be present in any landfill release, the scope of the laboratory analysis for each retest sample shall include all VOCs detectable in that retest sample. Therefore, a confirming retest for either parameter shall have

validated the original indication even if the suite of constituents in the confirming retest sample(s) differs from that in the sample which initiated the retest;

2) Because all Constituents of Concern that are jointly addressed in the non-statistical testing under Part II.A.2.c. remain as individual Constituents of Concern, the scope of the laboratory analysis for the non-statistical retest samples shall be narrowed to involve only those constituents detected in the sample which initiated the retest.

B. RESPONSE TO VOC DETECTION IN BACKGROUND

1. Except as indicated in Part II.B.2., any time the laboratory analysis of a sample from a Background Monitoring Point, sampled for VOCs under Part II.A., shows either (1) two or more VOCs above their respective MDL, or (2) one VOC above its respective PQL, then the Discharger shall immediately notify the Regional Board by phone that possible background contamination has occurred, shall follow up with written notification by certified mail within seven days, and shall obtain two new independent VOC samples from that Background Monitoring Point and send them for laboratory analysis of all detectable VOCs within thirty days. If either or both the new samples validates the presence of VOC(s) at that Background Monitoring Point, using the above procedure, the Discharger shall:

   a. immediately notify the Regional Board about the VOC(s) verified to be present at that Background Monitoring Point, and follow up with written notification submitted by certified mail within seven days of validation; and

   b. within 180 days of validation, submit a report -- acceptable to the Executive Officer -- which examines the possibility that the detected VOC(s) originated from the Unit and proposing appropriate changes to the monitoring program.

2. If the Executive Officer determines, after reviewing the report submitted under Part II.B.1.b., that the VOC(s) detected originated from a source other than the Unit, the Executive Officer will make appropriate changes to the monitoring program.

3. If the Executive Officer determines, after reviewing the report submitted under Part II.B.1.b., that the detected VOC(s) most likely originated from the Unit, the Discharger shall assume that a release has been detected and shall immediately begin carrying out the requirements of Part III.D.2.d.

Part III: SAMPLING

A. SAMPLING AND ANALYTICAL METHODS

Sample collection, storage, and analysis shall be performed according to the most recent version of Standard USEPA Methods, and in accordance with an approved sampling and analysis plan. Water and waste analysis shall be performed by a laboratory approved for these analyses by the State of California. Specific methods of analysis must be identified. If methods other than USEPA-approved methods or Standard Methods are used, the exact methodology must be submitted for review and must be approved by the Executive Officer prior to use. The director of the laboratory whose name appears on the certification shall supervise all analytical work in his/her laboratory and shall sign all reports of such work submitted to the Regional Board. All monitoring instruments and equipment

shall be properly calibrated and maintained to ensure accuracy of measurements. In addition, the Discharger is responsible for seeing that the laboratory analysis of all samples from Monitoring Points and Background Monitoring Points meets the following restrictions:

1. The methods of analysis and the detection limits used must be appropriate for the expected concentrations. For detection monitoring of any constituent or parameter that is found in concentrations which produce more than 90% non-numerical determinations [i.e., "trace" or "ND"] in data from Background Monitoring Points for that medium, the analytical method having the lowest "facility-specific method detection limit [MDL]" -- defined in Part III.B.7. -- shall be selected from among those methods which would provide valid results in light of any "Matrix Effects" [defined in Part III.B.6.] involved.

2. "Trace" results -- results falling between the MDL and the facility-specific practical quantification limit [PQL] -- shall be reported as such, and shall be accompanied both by the estimated MDL and PQL values for that analytical run and by an estimate of the constituent's concentration.

3. MDLs and PQLs shall be derived by the laboratory for each analytical procedure, according to State of California laboratory accreditation procedures. These MDLs and PQLs shall reflect the detection and quantification capabilities of the specific analytical procedure and equipment used by the lab, rather than simply being quoted from USEPA analytical method manuals. If the lab suspects that, due to a change in matrix or other effects, the true detection limit or quantification limit for a particular analytical run differs significantly from the laboratory-derived MDL/PQL values, the results shall be flagged accordingly, along with an estimate of the detection limit and quantification limit actually achieved.

4. All QA/QC data shall be reported, along with the sample results to which it applies, including the method, equipment, and analytical detection limits, the recovery rates, an explanation for any recovery rate that is less than 80%, the results of equipment and method blanks, the results of spiked and surrogate samples, the frequency of quality control analysis, and the name and qualifications of the person(s) performing the analyses Sample results shall be reported unadjusted for blank results or spike recovery.

5. Upon receiving written approval from the Executive Officer, an alternative statistical or non-statistical procedure can be used for determining the significance of analytical results for a constituent that is a common laboratory contaminant (i.e., methylene chloride, acetone, diethylhexyl phthalate, and di-n-octyl phthalate) during any given Reporting Period in which QA/QC samples show evidence of laboratory contamination for that constituent. Nevertheless, analytical results involving detection of these analytes in any background or downgradient sample shall be reported and flagged for easy reference by Regional Board staff.

6. Unknown chromatographic peaks shall be reported, along with an estimate of the concentration of the unknown analyte. When unknown peaks are encountered, second column or second method confirmation procedures shall be performed to attempt to identify and more accurately quantify the unknown analyte.

7. In cases where contaminants are detected in QA/QC samples [i.e., field, trip, or lab blanks], the accompanying sample results shall be appropriately flagged.

8. The MDL shall always be calculated such that it represents a concentration associated with a 99% reliability of a non-zero result.

9. Sample collection, storage, and analyses specified in this Monitoring and Reporting Program shall be performed according to the written Sampling and Analysis plan (SAP) contained in the April, 1989 Kaman Tempo report titled, " Ground Water Monitoring Risk Assessment/Feasibility Study, Phase I". Any changes to the SAP must be submitted for Executive Officer approval prior to implementation.

10. Analyses shall be performed by a laboratory certified for these analyses by the State Department of Health Services. The laboratory director whose name appears on the certification shall supervise all analytical work performed and shall sign all laboratory reports submitted.

11. All monitoring instrument and equipment shall be properly calibrated and maintained to ensure accuracy. Calibration and maintenance records shall be kept and made available upon request by the Regional Board.

B. DEFINITION OF TERMS

1. The "Monitored Media" are those water- or gas-bearing media that are monitored pursuant to this Monitoring and Reporting Program. The Monitored Media may include: (1) ground water in the uppermost aquifer, in any other portion of the zone of saturation [§2601 of Chapter 15] in which it would be reasonable to anticipate that waste constituents migrating from the Unit could be detected, and in any perched zones underlying the Unit, (2) any bodies of surface water that could be measurably affected by a release, (3) soil pore liquid beneath and/or adjacent to the Unit, and (4) soil pore gas beneath and/or adjacent to the Unit.

2. The "Constituents of Concern [COC]" are those constituents which are likely to be in the waste in the Unit or which are likely to be derived from waste constituents, in the event of a release. The Constituents of Concern for this Unit are listed in Discharge Specification B.5.a. of this Order.

3. The "Monitoring Parameters" consist of a short list of constituents and parameters used for the majority of monitoring activity. The Monitoring Parameters for this Unit are listed in Section I.D.2. of this MRP. Monitoring for the short list of Monitoring Parameters constitutes "indirect monitoring", in that the results are used to indirectly indicate the success or failure of adequate containment for the longer list of Constituents of Concern.

4. The "Volatile Organics Composite Monitoring Parameter for Water [VOC_{water}]" and the "Volatile Organics Monitoring Parameter for Soil Pore Gas [VOC_{spg}] are composite Monitoring Parameters addressing all volatile organic constituents detectable in a sample of water. [See Part II.2. of this MRP for additional discussion of these Monitoring Parameters.]

5. "Standard Observations" refer to:

   a. For Receiving Waters;

      1) Floating and suspended materials of waste origin: presence or absence, source, and size of affected area;

      2) Discoloration and turbidity: description of color, source, and size of affected area;

3) Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

4) Evidence of beneficial use: presence of water-associated wildlife;

5) Flow rate; and

6) Weather conditions: wind direction and estimated velocity, total precipitation during the previous five days and on the day of observation;

b. Along the perimeter of the Unit:

1) Evidence of liquid leaving or entering the Unit, estimated size of affected area, and flow rate [show affected area on map];

2) Evidence of odors: presence or absence, characterization, source, and distance of travel from source; and

3) Evidence of erosion and/or of exposed refuse.

c. For the Unit:

1) Evidence of ponded water at any point on the waste management facility [show affected area on map];

2) Evidence of odors: presence or absence, characterization, source, and distance of travel from source;

3) Evidence of erosion and/or of daylighted refuse; and

4) "Standard Analysis and Measurements", which refers to:

a) Turbidity [only for water samples], in NTU;

b) Water elevation to the nearest 1/100th foot above mean sea level [only for ground water monitoring]; and

c) Sampling and statistical/non-statistical analysis of the Monitoring Parameters.

6. "Matrix Effect" refers to any increase in the Method Detection Limit or Practical Quantification Limit for a given constituent as a result of the presence of other constituents -- either of natural origin or introduced through a release -- that are present in the sample of water or soil-pore gas being analyzed.

7. "Facility-Specific Method Detection Limit [MDL]", for a given analytical laboratory using a given analytical method to detect a given constituent [in spite of any Matrix Effect] means the lowest concentration at which the laboratory can regularly differentiate -- with 99% reliability -- between a sample which contains the constituent and one which does not.

8. "Facility-Specific Practical Quantification Limit [PQL]", for a given analytical laboratory using a given analytical method to determine the concentration of a given constituent [in spite of any Matrix Effect] means the lowest constituent concentration the laboratory can regularly quantify within specified limits of precision that are acceptable to the Regional Board Executive Officer.

9. "Reporting Period" means the duration separating the submittal of a given type of monitoring report from the time the next iteration of that report is scheduled for submittal; therefore, the reporting period for analysis of all Constituents of Concern is five years, and for Monitoring Parameters it is three months ["Winter" = January 1 to March 31; "Spring" = April 1 to June 31; "Summer" = July 1 to September 30; and "Fall" = October 1 to December 1]. The Reporting Period for the Annual Summary Report extends from April 1 of the previous year to March 31 of the current year. The due date for any given report will be 30 days after the end of its Reporting Period, unless otherwise stated.

10. "Receiving Waters" refers to any surface water which actually or potentially receives surface or ground waters which pass over, through, or under waste materials or contaminated soils. In this case the Santa Ynez River is considered the receiving waters:

11. "Affected Persons" refers to all individuals who either own or reside upon the land that directly overlies any part of that portion of a gas- or liquid-phase release that has migrated beyond the facility boundary.

C. RECORDS TO BE MAINTAINED

Written reports shall be maintained by the Discharger or laboratory, and shall be retained for a minimum of five years. This period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Board. Such records shall show the following for each sample:

1. Identity of sample and of the Monitoring Point or Background Monitoring Point from which it was taken, along with the identity of the individual who obtained the sample;

2. Date and time of sampling;

3. Date and time that analyses were started and completed, and the name of the personnel performing each analysis;

4. Complete procedure used, including method of preserving the sample, and the identity and volumes of reagents used;

5. Calculation of results; and

6. Results of analyses, and the MDL and PQL for each analysis.

D. REPORTS TO BE FILED WITH THE BOARD

1. DETECTION AND CORRECTIVE ACTION MONITORING REPORTS

A written "Detection Monitoring Report" shall be submitted quarterly [Part I.D.2.], in addition to an "Annual Summary Report" [Part III.D.3]. Every five years, the Discharger shall submit a report concerning the direct analysis of all Constituents of Concern as indicated in Part I.D.3 ["COC Report"]. All reports shall be submitted no later than one month following the end of their respective Reporting Period. The reports shall be comprised of at least the following:

a. Letter of Transmittal

A letter transmitting the essential points in each report shall accompany each report. Such a letter shall include a discussion of any requirement violations found since the last such report was submitted, and shall describe actions taken or planned for correcting those violations. If the Discharger has previously submitted a detailed time schedule for correcting said requirement violations, a reference to the correspondence transmitting such schedule will be satisfactory. If no violations have occurred since the last submittal, this shall be stated in the letter of transmittal. Monitoring reports and the letter transmitting the monitoring reports shall be signed by a principal executive officer at the level of vice president or above, or by his/her duly authorized representative, if such representative is responsible for the overall operation of the facility from which the discharge originates. The letter shall contain a statement by the official, under penalty of perjury, that to the best of the signer's knowledge the report is true, complete, and correct;

b. Each Monitoring Report and each COC Report shall include a compliance evaluation summary. The summary shall contain at least:

1) For each monitored ground water body, a description and graphical presentation of the velocity and direction of ground water flow under/around the Unit, based upon water level elevations taken during the collection of the water quality data submitted in the report;

2) Pre-Sampling Purge for Samples Obtained From Wells: For each monitoring well addressed by the report, a description of the method and time of water level measurement, of the type of pump used for purging and the placement of the pump in the well, and of the method of purging (the pumping rate, the equipment and methods used to monitor field pH, temperature, and conductivity during purging, the calibration of the field equipment, results of the pH, temperature, conductivity, and turbidity testing, the well recovery time, and the method of disposing of the purge water);

3) Sampling: For each Monitoring Point and Background Monitoring Point addressed by the report, a description of the type of pump -- or other device -- used and its placement for sampling, and a detailed description of the sampling procedure [number and description of the samples, field blanks, travel blanks, and duplicate samples taken, the type of containers and preservatives used, the date and time of sampling, the name and qualifications of the person actually taking the samples, and any other observations];

4) Post-Sampling Purge [§2550(e)(12)(B)]: For each monitoring well addressed by the report, a description of how the well was purged to remove all portions of the water that was in the well bore while the sample was being taken;

c. A map or aerial photograph showing the locations observation stations, Monitoring Points, and Background Monitoring Points;

d. For each Detection Monitoring Report and each COC Report, include laboratory statements of results of all analyses demonstrating compliance with Part III.A.;

e. An evaluation of the effectiveness of the leachate monitoring and control facilities, and of the run-off/run-on control facilities;

f. A summary and certification of completion of all Standard Observations [Part III.B.5.] for the Unit, for the perimeter of the Unit, and for the Receiving Waters; and

g. The quantity and types of wastes discharged and the locations in the Unit where waste has been placed since submittal of the last such report.

2. CONTINGENCY REPORTING

a. The Discharger shall report by telephone concerning any seepage from the disposal area immediately after it is discovered. A written report shall be filed with the Board within seven days, containing at least the following information:

1) A map showing the location(s) of seepage;

2) An estimate of the flow rate;

3) A description of the nature of the discharge (e.g., all pertinent observations and analyses); and

4) corrective measures underway or proposed.

b. Should the initial statistical comparison [Part II.A.1.] or non-statistical comparison [Part II.A.2.] indicate, for any Constituent of Concern or Monitoring Parameter, that a release is tentatively identified, the Discharger shall immediately notify the Regional Board verbally as to the Monitoring Point(s) and constituent(s) or parameter(s) involved, shall provide written notification by certified mail within seven days of such determination [§2550.8(j)(1)], and shall carry out a discrete retest in accordance with Parts I.D.1. and II.A.3. If the retest confirms the existence of a release, the Discharger shall carry out the requirements of Part III.D.2.d. In any case, the Discharger shall inform the Regional Board of the outcome of the retest as soon as the results are available, following up with written results submitted by certified mail within seven days of completing the retest.

c. If either the Discharger or the Regional Board determines that there is significant physical evidence of a release [§2550.1(3) of Article 5], the Discharger shall immediately notify the Regional Board of this fact by certified mail [or acknowledge the Regional Board's determination] and shall carry out the requirements of Part III.D.2.d. for all potentially-affected monitored media.

d. If the Discharger concludes that a release has been discovered:

1) If this conclusion is not based upon "direct monitoring" of the Constituents of Concern, pursuant to Part I.D.3., then the Discharger shall, within thirty days, sample for all Constituents of Concern at all Monitoring Points and submit them for laboratory analysis. Within seven days of receiving the laboratory analytical results, the Discharger shall notify the Regional Board, by certified mail, of the concentration of all Constituents of Concern at each Monitoring Point. Because this scan is not to be tested against background, only a single datum is required for each Constituent of Concern at each Monitoring Point [§2550.8(k)(1)];

2) The Discharger shall, within 90 days of discovering the release, submit a Revised Report of Waste Discharge proposing an Evaluation Monitoring Program meeting the requirements of §2550.8(k)(5) and §2550.9 of Article 5; and

3) The Discharger shall, within 180 days of discovering the release, submit a preliminary engineering feasibility study meeting the requirements of §2550.8(k)(6) of Article 5.

e. Any time the Discharger concludes -- or the Regional Board Executive Officer directs the Discharger to conclude -- that a liquid- or gaseous-phase release from the Unit has proceeded beyond the facility boundary, the Discharger shall so notify all persons who either own or reside upon the land that directly overlies any part of the plume [Affected Persons].

1) Initial notification to Affected Persons shall be accomplished within 14 days of making this conclusion and shall include a description of the Discharger's current knowledge of the nature and extent of the release; and

2) Subsequent to initial notification, the Discharger shall provide updates to all Affected Persons -- including any newly Affected Persons -- within 14 days of concluding there has been any material change in the nature or extent of the release.

3. ANNUAL SUMMARY REPORT

The Discharger shall submit an annual report to the Board covering the previous monitoring year. The Reporting Period ends March 31. This report shall contain:

a. A Graphical Presentation of Analytical Data [§2550.7(e)(14) of Article 5]. For each Monitoring Point and Background Monitoring Point, submit in graphical format the laboratory analytical data for all samples taken within at least the previous five calendar years. Each such graph shall plot the concentration of one or more constituents over time for a given Monitoring Point or Background Monitoring Point, at a scale appropriate to show trends or variations in water quality. The

graphs shall plot each datum, rather than plotting mean values. For any given constituent or parameter, the scale for background plots shall be the same as that used to plot downgradient data. On the basis of any aberrations noted in the plotted data, the Executive Officer may direct the Discharger to carry out a preliminary investigation [§2510(d)(2)], the results of which will determine whether or not a release is indicated;

b. All monitoring analytical data obtained during the previous two six-month Reporting Periods, presented in tabular form as well as on 5.25" or 3.5" diskettes, either in MS-DOS/ASCII format or in another file format acceptable to the Executive Officer. Data sets too large to fit on a single 360 K.B. diskette may be submitted on disk in a commonly available compressed format [e.g., PK-ZIP or NORTON BACKUP]. The Regional Board regards the submittal of data in hard copy and on diskette as "...the form necessary for..." statistical analysis [§2550.8(h)], in that this facilitates periodic review by the Board's statistical consultant;

c. A comprehensive discussion of the compliance record, and the result of any corrective actions taken or planned which may be needed to bring the Discharger into full compliance with the waste discharge requirements;

d. A map showing the area, if any, in which filling has been completed during the previous calendar year;

e. A written summary of the ground water and soil-pore gas analyses, indicating any changes made since the previous annual report; and

f. An evaluation of the effectiveness of the leachate monitoring/control facilities, pursuant to §2543(b,c, & d).

ORDERED BY William R. Leonard
Executive Officer

11/16/93
Date

WA/LOMPOC.MRP